

The listing of claims will replace all prior versions and listings, of claims in the application.

Listing of claims:

1-81 (cancelled)

82. (new) An isolated human monoclonal antibody or fragment thereof which binds specifically to an epitope of an osteoprotegerin binding protein, the epitope comprising at least part of the amino acid sequence of Figure 4 (SEQ ID NO: 39), wherein the antibody is obtained by immunization of a transgenic non-human animal capable of producing human antibodies.

83. (new) The antibody of Claim 82 which comprises a recombinant antibody or fragment thereof.

84. (new) The antibody of Claim 82 which binds specifically to an epitope on an extracellular domain of an osteoprotegerin binding protein or to an epitope on a fragment of an extracellular domain of an osteoprotegerin binding protein.

85. (new) The antibody of Claim 82 which binds specifically to an epitope comprising at least part of amino acid residues 69-317 of Figure 4 (SEQ ID NO:39).

86. (new) The antibody of Claim 82 which binds specifically to an epitope which comprises at least part of the BB' loop.

87. (new) The antibody of Claim 82 which binds specifically to an epitope which comprises at least part of the EF loop.

88. (new) The antibody of Claim 82 which is present in an amount effective to inhibit bone resorption.

89. (new) A composition comprising the antibody of Claim 82 and a pharmaceutically acceptable diluent, carrier, solubilizer, emulsifier, preservative and/or adjuvant.

90. (new) The composition of Claim 89 further comprising a bone morphogenic factor selected from the group consisting of BMP-1 to BMP-12, transforming growth factor- β , a transforming growth factor- β family member, a fibroblast growth factor selected from the group consisting of FGF-1 to FGF-10, an interleukin-1 inhibitor, a TNF α inhibitor, parathyroid hormone, an E series prostaglandin, a bisphosphonate, or a bone-enhancing mineral.

91. (new) The antibody of Claim 82 which is obtained by immunization with an osteoprotegerin binding protein comprising the amino acid sequence of Figure 4 (SEQ ID NO:39), a membrane associated form thereof, a soluble form thereof, or a fragment thereof.

92. (new) The antibody of Claim 82 which is produced by expression of a nucleic acid encoding the antibody or fragment in a transformed or transfected host cell.